

CLAIMS

What is claimed is:

- 1 1. A friction clutch, comprising:
 - 2 a housing arrangement connectable to a drive element for rotation about
 - 3 an axis of rotation;
 - 4 a pressure plate having a first axial side and a second axial side, said
 - 5 pressure plate being connected to the housing arrangement such that the pressure
 - 6 plate is fixed with respect to rotation relative to said housing arrangement and is axially
 - 7 movable relative to said housing arrangement;
 - 8 a force-exerting arrangement arranged between said housing
 - 9 arrangement and said pressure plate, said force exerting arrangement acting on said first
 - 10 axial side of said pressure plate to produce an engaged state of said friction clutch and
 - 11 liftable from said pressure plate to produce a disengaged state of said friction clutch;
 - 12 and
 - 13 a friction disk connected to said housing arrangement such that said
 - 14 friction disk is fixed with respect to rotation relative to said housing arrangement and
 - 15 axially movable relative to said housing arrangement, said second axial side of said
 - 16 pressure plate acting on said friction disk in the engaged state of said friction clutch,
 - 17 said friction disk including a ring-shaped friction lining carrier carrying at least one
 - 18 friction lining element on an axial side of said friction lining carrier facing way from said
 - 19 pressure plate,

20 wherein said friction disk is connected to said pressure plate for limiting
21 movement of said friction disk in the direction away from said second axial side of said
22 pressure plate.

1 2. The friction clutch of claim 1, wherein said pressure plate has an
2 actuating surface on said second axial side facing one of said friction disk and an
3 element arranged between said second axial side and said friction disk, at least an area
4 of said actuating surface has a surface normal that is not parallel to the axis of rotation
5 when the force-exerting arrangement is not acting on said pressure plate, and wherein
6 said friction disk is connected to said pressure plate such that said friction disk is
7 movable relative to said pressure plate, said pressure plate being deformable between
8 a tensioned state, in which said force-exerting arrangement acts on said pressure plate
9 and said actuating surface assumes the same shape as that of one of said friction disk
10 and an element between said second axial side and said friction disk, and a relaxed
11 state, in which said force-exerting arrangement is not acting on the pressure plate.

1 3. The friction clutch of claim 2, further comprising a plurality of
2 connecting elements for connecting said friction lining carrier to said pressure plate.

1 4. The friction clutch of claim 3, wherein said connecting elements are
2 rigidly connected to said friction lining carrier but allow relative movement between said
3 pressure plate and said friction lining carrier.

1 5. The friction clutch of claim 4, wherein said connecting elements are
2 supported in the axial direction against said pressure plate when said pressure plate is
3 in the relaxed state.

1 6. The friction clutch of claim 5, wherein at least one of said
2 connecting elements is a stepped rivet having a first head connected to a section of
3 smaller diameter which passes through said friction lining carrier, a section of larger
4 diameter adjacent to said section of smaller diameter and which passes through said
5 pressure plate, wherein said friction lining carrier is held firmly in place between the
6 section of larger diameter and said first head of said stepped rivet, and wherein a
7 second head of said stepped rivet adjacent to said section of larger diameter and
8 supported on said first axial side of said pressure plate.

1 7. The friction clutch of claim 1, further comprising a plurality of friction
2 disks connected to said housing arrangement such that said plurality of frictions disks
3 are fixed with respect to rotation relative to said housing arrangement and axially
4 movable relative to said housing arrangement, a hub rotatable about said axis of
5 rotation, and at least one further friction disk connected to said hub such that said at
6 least one further disk is fixed with respect to rotation and axially movable relative to said
7 hub, wherein said at least one further disk is always located between two of said
8 plurality of friction disks connected to said housing arrangement.

1 8. The friction clutch of claim 7, wherein at least one friction disk of
2 said plurality of friction disks connected to said housing arrangement has a ring-shaped
3 friction lining carrier and friction lining elements attached to both axial sides.

1 9. The friction clutch of claim 1, wherein said force-exerting
2 arrangement comprises an energy-storage device supported against said pressure
3 plate and said housing arrangement.

1 10. The friction clutch of claim 2, wherein said actuating surface is
2 conical.

1 11. The friction clutch of claim 1, further comprising a plurality of
2 connecting elements for connecting said friction lining carrier to said pressure plate.

1 12. The friction clutch of claim 11, wherein said connecting elements
2 are rigidly connected to said friction lining carrier but allow relative movement between
3 said pressure plate and said friction lining carrier.